



Scopus AI

改变你的科研发现方式

Elsevier Research Intelligence

爱思唯尔科研管理部 杨韵白



Agenda



- Scopus AI的能与不能
- 为什么准确信源对于AI应用于科研如此重要?
- 在科研场景中我们还可以用Scopus AI做什么?
- 利用Scopus AI以及数据指标助力基金奖项申请



认识Scopus AI的能与不能

几个问题

1、Scopus AI能不能帮我写现成的论文？

不能！

2、Scopus AI能不能帮我找到我最需要的论文？

能！ 而且很快！

3、Scopus AI能不能帮我梳理知识体系？

能！ 而且也非常快！

Scopus AI的目标：加速知识的发现过程，改变学术发现方式

为什么Scopus AI可以改变学术发现方式?



科研小白
新领域—从哪里入手?

交叉领域-隔行如隔山

哪些关键词? 怎么检索

有哪些问题值得关注?

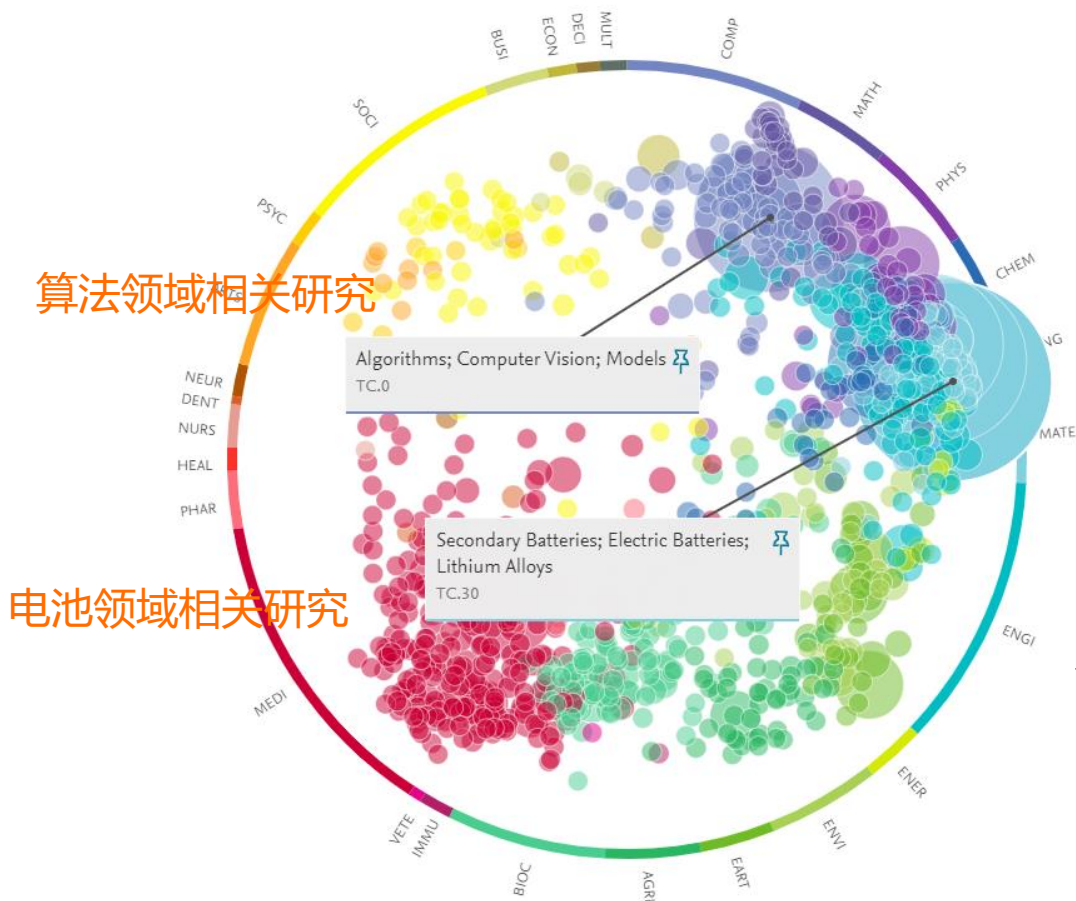
有哪些最新进展, 重要发现

网络上有没有胡说八道?

DEMO: 快速了解一个科学问题在研究什么内容



南方科技大学核心贡献研究主题



Decomposition; Evolutionary Multiobjective Optimization; Pareto Front
进化多目标优化

<input type="checkbox"/>	Institution	Scholarly Output ↓	Views Count ↓	Field-Weighted Citation Impact ↓	Citation Count ↓
1.	<input type="checkbox"/> CHN Southern University of Science and Technology	199	2,894	2.17	3,030
2.	<input type="checkbox"/> CHN Northeastern University China	103	1,626	1.72	1,276
3.	<input type="checkbox"/> CHN Xidian University	88	840	1.42	791
4.	<input type="checkbox"/> MEX Centro de Investigacion y de Estudios Avanzados del Instituto Politécnico Nacional	79	961	1.40	692
5.	<input type="checkbox"/> HKG City University of Hong Kong	79	1,037	2.62	1,209
6.	<input type="checkbox"/> CHN Shenzhen University	78	993	1.93	1,042
7.	<input type="checkbox"/> CHN Huazhong University of Science and Technology	71	945	1.64	542
8.	<input type="checkbox"/> USA Michigan State University	68	1,036	2.41	1,282
9.	<input type="checkbox"/> CHN China University of Geosciences, Wuhan	62	661	1.43	379
10.	<input type="checkbox"/> CHN National University of Defense Technology	62	838	2.68	1,029

<input type="checkbox"/>	Author	Affiliation	Scholarly Output ↓	Views Count ↓	Field-Weighted Citation Impact ↓	Citation Count ↓
1.	<input type="checkbox"/> Ishibuchi, Hisao	CHN Southern University of Science and Technology	90	1,318	1.56	1,239
2.	<input type="checkbox"/> Jin, Yaochu	GBR University of Surrey	65	1,592	4.43	2,523
3.	<input type="checkbox"/> Deb, Kalyanmoy	USA Michigan State University	57	835	2.38	1,129
4.	<input type="checkbox"/> Shang, Ke	CHN Southern University of Science and Technology	55	736	1.20	469
5.	<input type="checkbox"/> Coello, Carlos A.	MEX Centro de Investigacion y de Estudios Avanzados del Instituto Politécnico Nacional	54	677	1.69	587

开始Scopus AI使用



The screenshot shows the Scopus website interface. At the top left is the Scopus logo. To the right are navigation links for Search, Sources, and SciVal. The main heading is "Start exploring" with the subtext "Discover the most reliable, relevant, up-to-date research. All in one place." Below this is a horizontal menu with icons and labels for Documents, Authors, Researcher Discovery, Organizations, and Scopus AI Beta. The Scopus AI Beta link is highlighted with an orange box. Below the menu is a search bar with the placeholder text "What would you like to learn more about?". To the right of the search bar is a button labeled "点击开始" (Click to start). Below the search bar are search examples:

Search examples

- ↳ How does the diversity of personalities within a team impact the level of creativity exhibited by the team?
- ↳ How does seismology inform civil engineering designs?
- ↳ What are the different types of immunotherapy treatments being used for cancer?

使用总结

- 1、提问：概括问题得到概括的答案，细致问题得到细致答案，**问精准的问题。**
- 2、当初始答案不够细致时，查看扩展总结答案。
- 3、通过问题答案定位到高相关性论文和奠基性论文。
- 4、通过思维导图（Concept map）梳理科学问题的知识体系。
- 5、通过“Go Deeper”功能获得对于科学问题更深入的认知。

生成式AI对文献检索方式的变革



传统的检索方式：

- 通过关键词构建检索式
- 看Review，再看Article
- 看高被引论文
- 看最新文献
- 查找全文

基于生成式AI的检索方式：

- 设计一个想要了解的科学问题
- 得到科学问题的答案
- 思维导图方便理解
- 扩展答案
- 参考文献-查找全文
- 扩展问题，或者下一个问题



准确数据源的重要性

围绕生成式AI的争论

- 加剧数字贫困
- 超越国家监管
- 未经同意使用内容
- 缺乏对现实世界的了解
- **AI生成的内容造成信源不准确**
- **产生深度贗品**

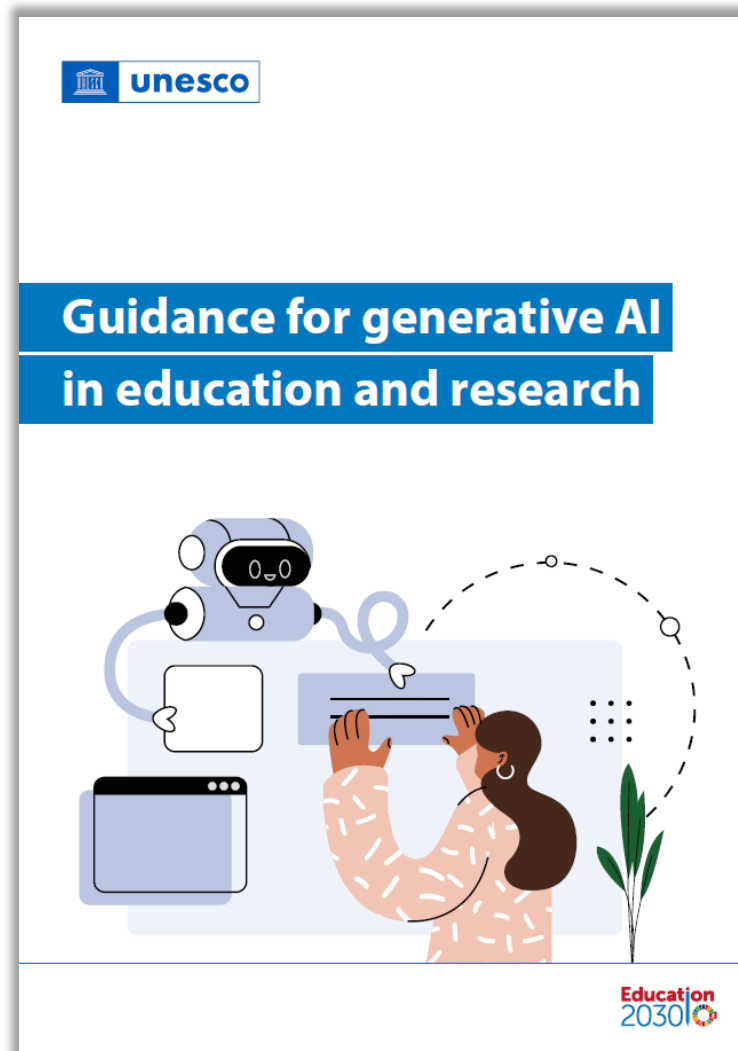
[Home](#) > [Skeletal Radiology](#) > [Article](#)

A comparison of ChatGPT-generated articles with human-written articles

Scientific Article | [Published: 14 April 2023](#)

Volume 52, pages 1755–1758, (2023) [Cite this article](#)

该研究作者在文中警告称，虚构的内容「**对没有经验的读者来说可能看起来是真实的**」



联合国教科文组织
《生成式人工智能在教育和研究中的应用指南》

Scopus AI的答案都有可靠的文献来源



What is the

Summary

Based on the
summarized

- Research For
magnesium a

- Emerging A
Mg materials

- Applications
applications, l

- Challenges:
identified, an

- Global Prod
production 2

- Academic C
various institu

State Universi

[Download](#) [Print](#) [Save to PDF](#) [Save to list](#) [Create bibliography](#)

Document type
Article • *Gold Open Access*

Source type
Journal

ISSN
22139567

DOI
10.1016/j.jma.2022.04.001

[View more](#)

Journal of Magnesium and Alloys • *Open Access* • Volume 10, Issue 4, Pages 863 - 898 • April 2022

Research advances of magnesium and magnesium alloys worldwide in 2021

[Song, Jiangfeng^a](#) ; [Chen, Jing^a](#) ; [Xiong, Xiaoming^a](#) ;

[Peng, Xiaodong^a](#) ; [Chen, Daolun^b](#) ; [Pan, Fusheng^a](#)

[Save all to author list](#)

^a National Engineering Research Center for Magnesium Alloys, Chongqing University, Chongqing, 400044, China

^b Department of Mechanical and Industrial Engineering, Ryerson University, Toronto, M5B 2K3, ON, Canada

200 99th percentile
Citations in Scopus

36.06
FWCI

49
Views count

[View all metrics](#)

[View PDF](#) [Full text options](#) [Export](#)

Scopus AI的严谨性

电影《黑豹》中的振金是不是最强金属？



Explore new topics and discover relevant references from 2013 [How it works](#)

What would you like to learn more about?

Is Vibranium the strongest metal on [earth](#)?



Is Vibranium the strongest metal on earth?

Summary

Based on the information in the provided abstracts, there is no direct mention of Vibranium, a fictional metal from the Marvel Universe. Therefore, there is no relevant information from the academic abstracts to support or refute the claim that Vibranium is the strongest metal on Earth. However, based on the user's query, it is important to note that Vibranium is a fictional metal from the Marvel Universe and does not exist in the real world. As a result, it cannot be compared to real-world metals such as those discussed in the academic abstracts.

If you have any other questions or need information on real-world metals, feel free to ask!

Scopus AI不会产生深度臆品

Scopus收录范围

• 全球最大的同行评议摘要&引文数据库

收录数据最为全面 文摘索引数据库

- 每日更新—每日更新约**13,000**篇新文献
- **20.90M** 开放获取文献
- “Articles in Press” from **>8,740** titles
- 来自多家预印本服务器的**1.68M**条预印本记录
- **6,128** 家活跃金色OA期刊

不同学科领域 期刊数量**	期刊	会议录	图书	专利
自然科学 14,558	27,950* 活跃同行评议期刊 6,128 金色OA期刊 (DOAJ/ROAD) 19.6M fully-indexed funding acknowledgements 1.68M 预印本 <ul style="list-style-type: none"> • 完整的元数据、摘要和引用文献 (1970年后的引用) • 引用追溯至 1970 	149K 会议活动 11.6M 会议论文 以工程和计算机科学为主	74.3K 系列丛书 300K 独立书籍 2.60M 图书条目 专注于社会科学、艺术 和人文科学	49.3M 专利 五大专利局： <ul style="list-style-type: none"> • WIPO • EPO • USPTO • JPO • UK IPO
健康科学 15,167				
社会科学与人文科学 14,553				
生命科学 7,818				

28K来源出版物的**90M**条记录, **149K** 会议录和**289K** 独立图书
来自**105**个国家的**7,000**家出版商



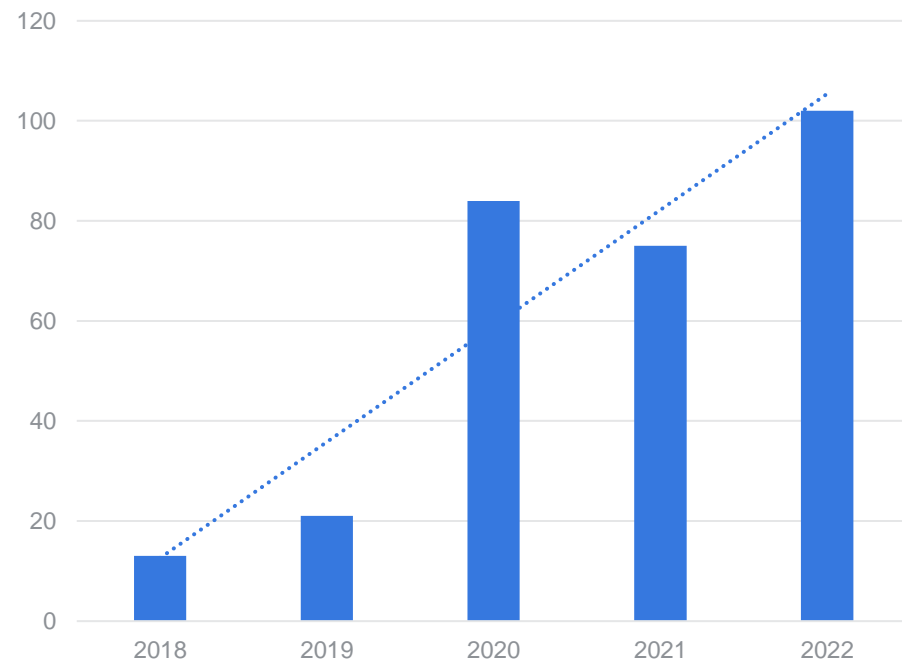
Scopus持续收录中国高质量期刊



Scopus关键数据 (截至2023年11月刊表)

- 收录约1260种中国大陆期刊
- * 其中超过700本是Scopus独有收录
- 22%为Citescore Q1区期刊;
- 中文期刊超过50%;
- 领军期刊&重点期刊100%覆盖, 梯队期刊> 86%

Scopus每年收录中国期刊数

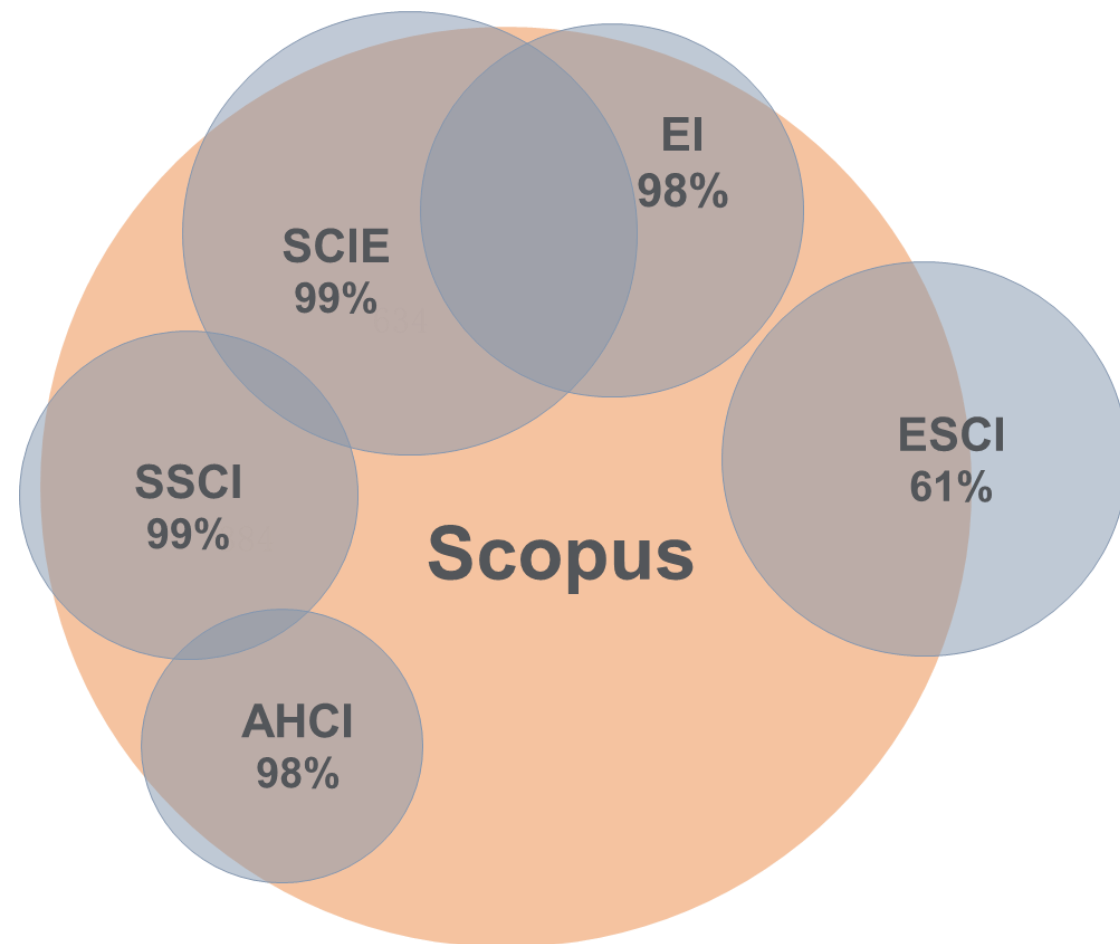


Scopus收录优势

- **时间**：数据最早回溯到1788年，Scopus AI可访问的数据包含最新的收录数据
- **类型**：包含多种文献类型：期刊论文，会议论文，图书等
- **学科**：覆盖自然科学、生命科学、医学和社会科学全学科领域

从AI培育的角度看：

数据量与数据质量兼顾的最优解



Scopus AI支持中文提问吗？

- 能！
- 注意参考文献范围
- 巧用Go Deeper！

Explore new topics and discover relevant references from 2013 [How it works](#)

What would you like to learn more about?
城镇化如何影响城乡居民收入差距



城镇化如何影响城乡居民收入差距

Summary

Based on the query about the impact of urbanization on the income gap between urban and rural residents, the abstracts provide relevant insights:

- **Urban Green Spaces and Socioeconomic Characteristics:** Research on urban green spaces and residents' socioeconomic characteristics shows that the spatial distribution of green spaces is associated with different socioeconomic groups. While some studies suggest that green spaces favor advantaged residents, others find that disadvantaged groups have easier access. A minority of studies indicate no significant association [1](#).

- **Urban Green Space Supply and Demand:** Understanding the supply and demand of urban green spaces is crucial for sustainable urban development. Most studies focus on either supply or demand, with limited integration. Future research should emphasize the matching of supply and demand, integrating subjective preferences and objective indicators [2](#).

- **Objective Evaluation of Urban Living Environment:** Objective evaluation of the living environment in urban areas can help identify issues and improve urban environments. A study in Fuzhou, China, used multiple data sources to assess urban living environment quality, revealing significant differences within the city [3](#).

References

- 1 Research progress on relationship between urban greenspace distribution and the socioeconomic characteristics of residents
Cao Y.-Q., Chen Z.-H., Huang G.-L., (...), Hua Y.-Y.
Ying yong sheng tai xue bao = The journal of applied ecology ↗
2019
- 2 Research progress on the differences and connections between supply and demand of urban green space
Chen Z.-H., Huang G.-L.
Ying yong sheng tai xue bao = The journal of applied ecology ↗
2020
- 3 Evaluation of the quality of human settlement in downtown Fuzhou based on multi-source data
Zhu Y.-J., Yao X.-J., Chen W., (...), Chi T.-H.
Ying yong sheng tai xue bao = The journal of applied ecology ↗
2020

[Show all 4 references](#)

Scopus AI在科研场景中的应用

Scopus AI 的应用场景

学生

- 初入科研，快速了解一个科学问题的研究内容
- 查询跨专业、跨领域的研究内容
- 帮助梳理研究脉络，撰写论文Introduction

教师

- 了解陌生研究领域的发展现状，促进交叉研究
- 梳理研究脉络，助力基金申请
- 课程设计，知识图谱拓展

图书馆

- 快速找到相关论文，提高科技查新效率
- 凝炼学科前沿热点
- 文献检索课程内容变化，学生科研素养提升



Scopus AI在基金申请中的应用

学术发现过程的效率提升

立项申请书中需要阐述的内容



(一) 立项依据与研究内容 (建议 8000 字以下):

1. 项目的立项依据 (研究意义、国内外研究现状及发展动态分析, 需结合科学研究发展趋势来论述科学意义, 或结合国民经济和社会发展中迫切需要解决的关键科技问题来论述其应用前景。附主要参考文献目录);
2. 项目的研究内容、研究目标, 以及拟解决的关键科学问题 (此部分为重点阐述内容);
3. 拟采取的研究方案及可行性分析 (包括研究方法、技术路线实验手段、关键技术等说明):

上述内容的撰写需要进行充分的文献信息调研, 以**降低项目不被立项的可能**。

基金不立项原因分析



主要部分	涉及的申请书	存在的主要问题
研究方案	77%	<ul style="list-style-type: none">研究方法不科学研究方案过于简单研究方法不当
立论依据	73%	<ul style="list-style-type: none">立论依据不足科学意义和应用前景不大对国内外进展了解不够对选题的内容和意义阐述不充分
创新性	71%	<ul style="list-style-type: none">创新性不足，许多项目在国内外已有相关报道，甚至基金委已资助过类似项目
撰写方面	64%	<ul style="list-style-type: none">叙述过于简单对相关要求不了解写作不规范或书写错误
研究内容	64%	<ul style="list-style-type: none">研究内容太多太分散，深度不够重点不突出关键问题不当或不明确与研究目的不符
工作基础	61%	<ul style="list-style-type: none">缺乏相关工作基础，缺乏必要的前期结果以支持其前期的科学假说

文献信息调研过程中存在的问题

- 通过关键词检索，低相关性文章多
- 阅读文献需要消耗大量时间
- 难免有文献遗漏
- 将阅读的文献形成知识脉络耗时耗力



生成式AI是**提升效率**的最佳选择

*基于过往未获得资助的基金申请书的未立项原因分析

Scopus AI: 将海量的文献内容转化为可用的知识脉络



1. 设计一个想要了解的科学问题

Learn with AI-generated overviews based on documents since 2013 [How it works](#)

What would you like to learn more about?

What are the specific mechanisms by which traditional Chinese herbal medicine treats chronic heart failure?

中草药治疗慢性心力衰竭的机制是什么?

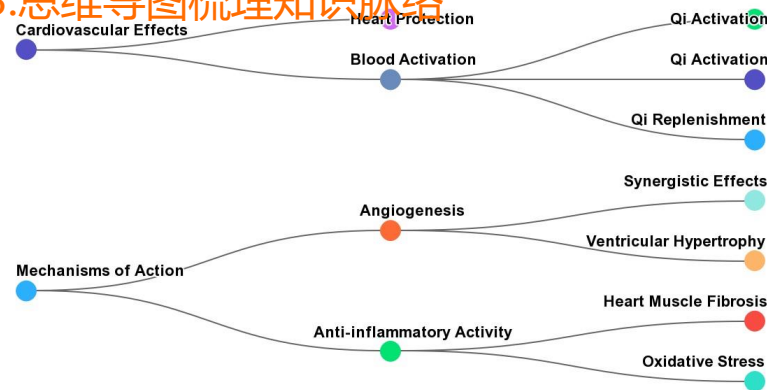
What are the specific mechanisms by which traditional Chinese herbal medicine treats chronic heart failure?

2. 得到科学问题的初步总结

Traditional Chinese herbal medicine treats chronic heart failure through specific mechanisms that target the underlying causes of the condition. Several studies have explored the efficacy and mechanisms of action of Chinese herbs in treating heart failure. [1](#) [2](#) [3](#) The major causes of heart failure according to traditional Chinese medicine (TCM) are Qi deficiency and blood stagnation. [2](#) Chinese herbal medicines such as Astragali Radix, Ginseng Radix et Rhizoma, Notoginseng Radix et Rhizoma, and

Salviae Miltiorrhizae Radix et Rhizoma. Qiangxin capsules, have been found to target internal cause and external symptoms. These findings note that the limitations of current studies on traditional Chinese medicine should be considered. [1](#)

3. 思维导图梳理知识脉络



4. 扩展总结

Expanded summary [?](#)

Traditional Chinese herbal medicine has shown potential in treating chronic heart failure through various mechanisms. Here are the key findings from the relevant literature.

1. **Active compounds:** Chinese medicinal herbs contain diverse compounds found to treat CHF through multiple molecular mechanisms. Astragali Radix, Ginseng Radix et Rhizoma, Notoginseng Radix et Rhizoma. [2](#) These herbs, along with compound formulations like Qiangxin capsules, play a significant role in the prevention and treatment of CHF.

2. **Effects on the cardiovascular system:** Traditional Chinese medicine (TCM) affects the cardiovascular system in the treatment of CHF by improving energy metabolism, and reducing oxidative stress and inflammation. Cardiac hypertrophy, antifibrotic, anti-inflammatory, antioxidant effects are mediated through multiple signaling pathways, including the PI3K/Akt, ERK1/2, and NF-κB pathways, and pro-inflammatory cytokines. [5](#)

3. **Anti-inflammatory and antioxidant effects:** Traditional Chinese medicine (TCM) exerts anti-inflammatory effects in the treatment of CHF. It can suppress and inhibit inflammation in patients or experimental models. Additionally, it has antioxidant effects that help mitigate oxidative stress and improve calcium cycling. [2](#)

In conclusion, traditional Chinese herbal medicine treats chronic heart failure through various mechanisms, including the action of active compounds, effects on the cardiovascular system, anti-inflammatory effects, and antioxidant effects. These findings suggest that TCM may be a promising complementary approach for the treatment of CHF.

5. 参考文献-确认信息来源

Summary references

Reference [1](#) • 69 citations

A review of chinese herbal medicine for the treatment of chronic heart failure [↗](#)

Wang, Y. [↗](#), Wang, Q. [↗](#), Li, C. [↗](#), (...), Wang, W. [↗](#) *Current Pharmaceutical Design* [↗](#) 2017

Show abstract [↕](#)

Reference [2](#) • 0 citations

Role and Mechanism of Chinese Medicinal Materials and Their Compound Formulas with Effects of Replenishing Qi, Activating Blood, and Dispelling Stasis in Prevention and Treatment of Heart Failure [↗](#)

Chen, J. [↗](#), Miu, X. [↗](#), Ding, M. [↗](#), (...), He, X. [↗](#) *Chinese Journal of Experimental Traditional Medical Formulae* [↗](#) 2022

Show abstract [↕](#)

Reference [3](#) • 6 citations

The traditional Chinese medicines treat chronic heart failure and their main bioactive constituents and mechanisms [↗](#)

6. 扩展问题, 或者提问下一个问题

↳ What are the specific herbal compounds in traditional Chinese medicine that have shown potential in treating chronic heart failure?

↳ How does traditional Chinese herbal medicine affect the cardiovascular system to improve symptoms of chronic heart failure?

↳ Are there any clinical studies or trials that have investigated the efficacy of traditional Chinese herbal medicine in the treatment of chronic heart failure?

将过去数周的工作压缩至数小时

基础问题 (对科学问题的概览)

- What is the frontier research of quantum computing?
- What are the challenges facing quantum computing?
-

延伸问题 (追踪细节)

- What algorithms are used in quantum computing?
- Tell me something about quantum hardware
- What are the different types of fault tolerance techniques used in quantum computing
-

对策问题 (汇总结论)

- List some promising algorithms of quantum computing
- What is the promising research on fault tolerance techniques?
-



Learn with AI-generated overviews based on documents since 2013 [How it works](#)

What would you like to learn more about?
量子计算机的前沿研究是什么

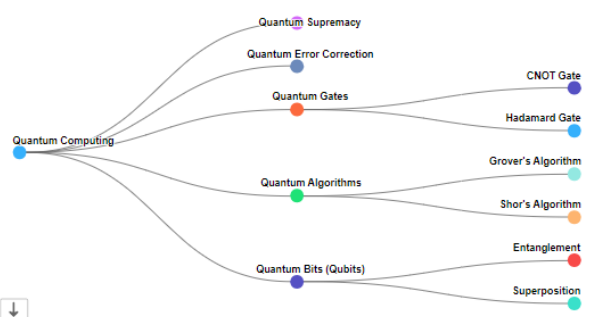
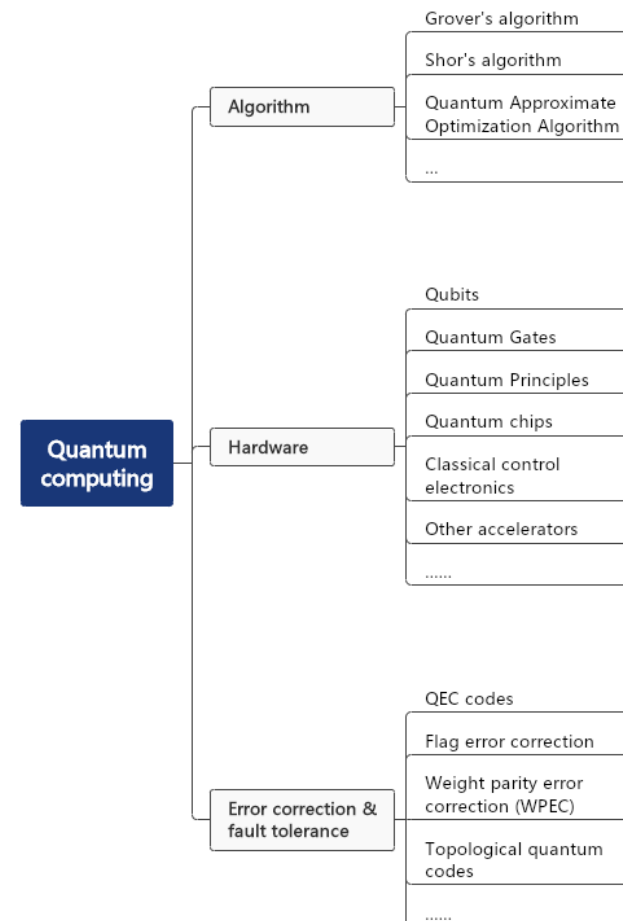
量子计算机的前沿研究是什么

The frontier research in quantum computing focuses on several key areas . 1 2 Here are some key points to consider:

- 1. Quantum algorithms:** Researchers are exploring new algorithms that can take advantage of the unique properties of quantum systems, such as superposition and entanglement, to solve complex problems more efficiently . 1
- 2. Quantum hardware:** Developing and improving the hardware components of quantum computers, such as qubits and quantum gates, is a crucial area of research . 1
- 3. Error correction and fault tolerance:** Due to the inherent fragility of quantum systems, error correction techniques and fault-tolerant designs are being investigated to ensure the reliability and scalability of quantum computers . 2

Overall, the frontier research in quantum computing encompasses the development of quantum algorithms, hardware improvements, and error correction techniques to advance the capabilities and practicality of quantum computers . 1 2

Show 2 references

设计一系列科学问题

快速获取科研信息

形成科研知识脉络

让科学家将宝贵的时间用于思考更有价值、更具创新性的问题

一个典型场景：基金申请材料撰写

“ 1. 学术成果概览

2004年至今，Scopus收录论文300篇，其中Q1分区(前25%)占 189篇(87.5%)，H指数79，总被引17147频次，篇均被引57.2次，领域加权引用影响力FWCI为2.39(1为全球平均水平)；300篇论文中，前1%高被引论文数为 27篇，在前10%期刊发文数为67.9%，国际合作比例为33.7%，有26篇论文被国际专利(WIPO、USTPO、EPO、JPO、UKIPO)所引用。

2. 主题聚类分析

在2012至2021年期间，分别在T16555(Bioceramics; Calcium Silicates; Scaffold)、T.797 (Bioactive Glass; Hydroxycarbonate Apatite) 和 T.3466 (Cancer; Photoacoustics; Theranostic; Nanomedicine) 聚类研究主题中，发表的论文领域加权引用影响力2.02以上，远高于全球平均水平，聚类主题显著度高于97%，近10年全球热度前3%内，属于前沿热点。

3. 影响力分析

XXX学者所领导的团队在生物陶瓷、硅酸钙和支架聚类主题中学术影响力全球排名第一。该聚类主题中，全球10篇代表著作中有 3 篇来自本团队。”

——节选自某位学者 **国家杰出青年科学基金** 申请材料

引用影响力

- 被引频次、篇均被引、H指数
- 高被引论文、高水平期刊论文占比
- FWCI(领域加权引用影响力)

创新影响力

- 五大国际专利局专利引用

研究前沿性

- 聚类研究主题的显著度

小同行占位

- 聚类研究主题下的代表作
- 聚类研究主题下的同行占位

Elsevier独有的数据及指标能够从更多维度来体现学者/团队的科研影响力

爱思唯尔多维评价指标体系



学术产出与引用

- 学术产出
- 学科领域多元性
- H-index
- H5-index
- 引用频次
- 篇均被引
- 被引率
- 高被引产出
- 高水平期刊产出
- **选刊指标**
- **领域加权引用影响力 (FWCI)**

合作多样性

- 国际合作占比
- 国际合作影响力
- 校企合作占比
- 校企合作影响力
- 高校-政府合作
- 高校-医院合作
- 高校-其它合作

创新影响力

- **专利引用**
- **专利引用率**

社会影响力

- **政策引用**
- **临床引用**
- **媒体提及**
- **社交媒体讨论**
- **联合国可持续发展目标 (SDG)**

研究前沿性

- **研究主题显著度**
- **研究主题下小同行排名占位**
- **基金资助**

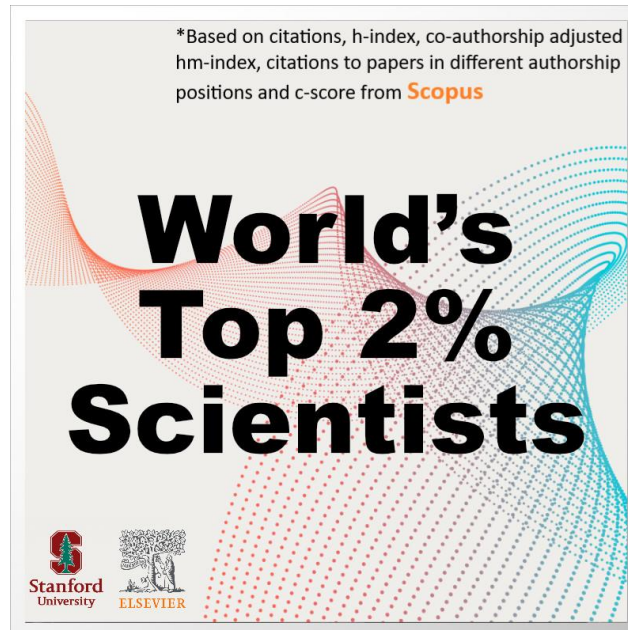
爱思唯尔多元指标的广泛应用



广泛影响力

- 第五轮学科评估
- THE、QS、软科等大学影响力排名
- 中国医学科学院重要医学进展评选
- 中国高被引学者
- 斯坦福大学世界前2%科学家

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